## **CLAIMS**

- 1. A fluorine containing polymerizable monomer represented by the formula [1],
- 5 [Chem. 23]

$$\begin{pmatrix}
HO & CF_3 \\
F_3C & a
\end{pmatrix}$$

$$NH_2 \qquad [1]$$

wherein "a" represents an integer of 1-4.

A fluorine-containing polymerizable monomer represented by the
 formula [2],

[Chem. 24]

$$\begin{array}{c|c}
 & CF_3 \\
\hline
 & CF_3 \\
\hline
 & CF_3
\end{array}$$

$$\begin{array}{c}
 & CF_3 \\
\hline
 & CF_3
\end{array}$$

$$\begin{array}{c}
 & a \\
\hline
 & A \\
\hline$$

wherein "a" represents an integer of 1-4.

3. A fluorine-containing polymerizable monomer represented by the formula [3],

[Chem. 25]

$$H_2N$$
 $CF_3$ 
 $CF_3$ 
 $CF_3$ 
 $CF_3$ 
 $CF_3$ 
 $CF_3$ 

wherein "a" represents an integer of 1-4.

4. 1-(2-hydroxyhexafluoro-2-propyl)-2,5-phenylenediamine represented by the formula [4],

[Chem. 26]

- 5. A polymer compound obtained by a polymerization using a
   fluorine-containing polymerizable monomer according to any one of claims 1-4.
  - 6. A polymer compound according to claim 5, which is represented by the formula [5],

[Chem. 27]

$$\begin{pmatrix}
OH \\
F_3C + CF_3
\end{pmatrix}_{a} O \\
H \\
N + B \\
O \\
O$$
[5]

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wherein "a" represents an integer of 1-4; B is a bivalent organic group containing at least one selected from aliphatic rings, aromatic rings and alkylene groups, it may contain fluorine, chlorine, oxygen, sulfur or nitrogen, and its hydrogens may be partially replaced with alkyl group, fluoroalkyl group, carboxylic group, hydroxyl group or cyano group; and "n" represents degree of polymerization.

7. A polymer compound represented by the formula [6] that is obtained by subjecting a compound, which is a polymer compound according to claim 6, in which a=1, and which has 2-hydroxyhexafluoro-2-propyl group at α-position of the amino group, to a cyclization condensation, [Chem. 28]

wherein B and n are defined as in the formula [5].

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8. A polymer compound that is synthesized by using a monomer according to claim 2 and is represented by the formula [7], [Chem. 29]